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#### 1 Hardware-accelerated visualization of volume-sampled distance fields

*Yamazaki, S.; Kase, K.; Ikeuchi, K.*

Shape Modeling International, 2003 , 12-15 May 2003

Pages:264 - 271

[Abstract] [PDF Full-Text (919 KB)] IEEE CNF

#### 2 Revisiting adaptively sampled distance fields

*de Figueiredo, L.H.; Velho, L.; de Oliveira, J.B.*

Computer Graphics and Image Processing, 2001 Proceedings of XIV Brazilian Symposium on , 15-18 Oct. 2001

Pages:377

[Abstract] [PDF Full-Text (128 KB)] IEEE CNF

#### 3 Efficient estimation of 3D Euclidean distance fields from 2D range images

*Friskin, S.F.; Perry, R.N.*

Volume Visualization and Graphics, 2002. Proceedings. IEEE / ACM SIGGRAPH Symposium on , 28-29 Oct. 2002

Pages:81 - 88

[Abstract] [PDF Full-Text (719 KB)] IEEE CNF

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Relevance scale **1 Manufacturable feature recognition and its integration with process planning** 

JungHyun Han, Inho Han

**June 1999 Proceedings of the fifth ACM symposium on Solid modeling and applications**Full text available:  pdf(1.09 MB)Additional Information: [full citation](#), [references](#), [index terms](#)

**Keywords:** feature dependency, feature recognition, machining sequence, manufacturability, process planning

**2 Model-based matching and hinting of fonts** 

Roger D. Hersch, Claude Betrisey

**July 1991 ACM SIGGRAPH Computer Graphics , Proceedings of the 18th annual conference on Computer graphics and interactive techniques**, Volume 25 Issue 4Full text available:  pdf(839.96 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In today's digital computers, phototypesetters and printers, typographic fonts are mainly given by their outline descriptions. Outline descriptions alone do not provide any information about character parts like stems serifs, shoulders, and bowls. But, in order to produce the best looking characters at a given size on a specific printer, non-linear operations must be applied to parts of the character shape. At low-resolution, grid-fitting of character outlines is required for generating nice and ...

**Keywords:** digital typography, grid-fitting automatic hinting, outline fonts, shape matching, topological model

**3 Session 7: Mesh forging: editing of 3D-meshes using implicitly defined occluders** 

G. H. Bendels, R. Klein

**June 2003 Proceedings of the Eurographics/ACM SIGGRAPH symposium on Geometry processing**Full text available:  pdf(3.44 MB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In recent years the ease of use and the flexibility in the editing process shifted into focus in modelling and animation applications. In this spirit we present a 3D mesh editing method that is similar to the simple constrained deformation (scodef) method<sup>9</sup>. We extend this

method to the so-called mesh forging paradigm by adding an occluder to the editing environment. Our method resembles and was in fact motivated by the forging process where an anvil is used to give the manipulated obj ...

#### 4 Constraint-based approach for automatic hinting of digital typefaces

Ariel Shamir

April 2003 **ACM Transactions on Graphics (TOG)**, Volume 22 Issue 2

Full text available:  pdf(384.75 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

The rasterization process of characters from digital outline fonts to bitmaps on displays must include additional information in the form of *hints* beside the shape of characters in order to produce high quality bitmaps. Hints describe constraints on sizes and shapes inside characters and across the font that should be preserved during rasterization. We describe a novel, fast and fully automatic method for adding those *hints* to characters. The method is based on identifying hinting ...

**Keywords:** Digital typography, fonts, geometric constraints, hinting

#### 5 Machine interpretation of CAD data for manufacturing applications

Qiang Ji, Michael M. Marefat

September 1997 **ACM Computing Surveys (CSUR)**, Volume 29 Issue 3

Full text available:  pdf(1.90 MB) Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Machine interpretation of the shape of a component for CAD databases is an important problem in CAD/CAM, computer vision, and intelligent manufacturing. It can be used in CAD/CAM for evaluation of designs, in computer vision for machine recognition and machine inspection of objects, and in intelligent manufacturing for automating and integrating the link between design and manufacturing. This topic has been an active area of research since the late '70s, and a significant number of computat ...

**Keywords:** artificial intelligence, automated process planning, computer-aided design, computer-integrated manufacturing, feature recognition, flexible automation

#### 6 Topological design of local-area networks using genetic algorithms

Reuven Elbaum, Moshe Sidi

October 1996 **IEEE/ACM Transactions on Networking (TON)**, Volume 4 Issue 5

Full text available:  pdf(1.32 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

#### 7 Feature attributes and their role in product modeling

Somashekhar Subrahmanyam, Michael J. Pratt, Warren DeVries

December 1995 **Proceedings of the third ACM symposium on Solid modeling and applications**

Full text available:  pdf(1.19 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

#### 8 Efficient and precise solid modelling using a 3D input device

André Stork, Martin Maidhof

May 1997 **Proceedings of the fourth ACM symposium on Solid modeling and applications**

Full text available:  pdf(2.23 MB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

**9 Kizamu: a system for sculpting digital characters**

Ronald N. Perry, Sarah F. Frisken

August 2001 **Proceedings of the 28th annual conference on Computer graphics and interactive techniques**Full text available:  pdf(4.04 MB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper presents Kizamu, a computer-based sculpting system for creating digital characters for the entertainment industry. Kizamu incorporates a blend of new algorithms, significant technical advances, and novel user interaction paradigms into a system that is both powerful and unique.

To meet the demands of high-end digital character design, Kizamu addresses three requirements posed to us by a major production studio. First, animators and artists want *digital clay* — a ...

**Keywords:** ADFs, character design, digital sculpting, distance fields, graphics systems, rendering, triangulation, volume modeling

**10 A mechanical proof of the Church-Rosser theorem**

N. Shankar

June 1988 **Journal of the ACM (JACM)**, Volume 35 Issue 3Full text available:  pdf(3.22 MB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

The Church-Rosser theorem is a celebrated metamathematical result on the lambda calculus. We describe a formalization and proof of the Church-Rosser theorem that was carried out with the Boyer-Moore theorem prover. The proof presented in this paper is based on that of Tait and Martin-Löf. The mechanical proof illustrates the effective use of the Boyer-Moore theorem prover in proof checking difficult metamathematical proofs.

**11 Scheduling threads for low space requirement and good locality**

Girija J. Narlikar

June 1999 **Proceedings of the eleventh annual ACM symposium on Parallel algorithms and architectures**Full text available:  pdf(1.69 MB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)**12 Session 7: Stellar subdivision grammars**

Luiz Velho

June 2003 **Proceedings of the Eurographics/ACM SIGGRAPH symposium on Geometry processing**Full text available:  pdf(306.38 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper we develop a new description for subdivision surfaces based on a graph grammar formalism. Subdivision schemes are specified by a context sensitive grammar in which production rules represent topological and geometrical transformations to the surface's control mesh. This methodology can be used for all known subdivision surface schemes. Moreover, it gives an effective representation that allows simple implementation and is suitable for adaptive computations.

- 13 Production ready feature recognition based automatic group technology part coding   
Arlo L. Ames  
May 1991 **Proceedings of the first ACM symposium on Solid modeling foundations and CAD/CAM applications**  
Full text available:  pdf(907.02 KB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

- 14 Dependency maintenance in declarative geometry modelling   
Rüdiger Klein  
May 1997 **Proceedings of the fourth ACM symposium on Solid modeling and applications**  
Full text available:  pdf(1.16 MB) Additional Information: [full citation](#), [references](#), [index terms](#)

- 15 A graph-based framework for feature recognition   
Sashikumar Venkataraman, Milind Sohoni, Vinay Kulkarni  
May 2001 **Proceedings of the sixth ACM symposium on Solid modeling and applications**  
Full text available:  pdf(941.79 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper discusses a feature recognition system for recognizing User Defined Features (UDF). The feature recognizer uses a graph-based approach to represent and recognize features. An attributed face adjacency graph consisting of topological and geometric attributes is used to represent UDF's. The feature recognition step involves finding similar subgraphs in the part graph. The novelty of the framework lies in the usage of a rich set of attributes to recognize a wide range of features effi ...

**Keywords:** attributed graphs, boundary representation, design tree, feature interactions, feature parameterization, feature suppression, feature-based design, graph grammars, user-defined features

- 16 Internet routing instability   
Craig Labovitz, G. Robert Malan, Farnam Jahanian  
October 1998 **IEEE/ACM Transactions on Networking (TON)**, Volume 6 Issue 5  
Full text available:  pdf(277.43 KB) Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

**Keywords:** communication system, communication system routing, computer network, internet, routing, stability

- 17 Education forum: Programming challenges: the programming contest training manual   
Steven S. Skiena, Miguel A. Revilla  
September 2003 **ACM SIGACT News**, Volume 34 Issue 3  
Full text available:  pdf(523.06 KB) Additional Information: [full citation](#)

- 18 Interactive feature extraction for a form feature conversion system   
Yong Seok Suh, Michael J. Wozny  
May 1997 **Proceedings of the fourth ACM symposium on Solid modeling and applications**

Full text available:  pdf(1.49 MB)

Additional Information: [full citation](#), [references](#), [index terms](#)

## 19 Navigating within the data: Zoom navigation exploring large information and application spaces

Michael Rüger, Bernhard Preim, Alf Ritter

May 1996 **Proceedings of the workshop on Advanced visual interfaces**

Full text available:  pdf(1.15 MB)

Additional Information: [full citation](#), [abstract](#), [references](#)

We present the concept of ZOOM NAVIGATION, a new interaction paradigm to cope with visualization and navigation problems as found in large information and application spaces. It is based on the *pluggable zoom*, an object-oriented component derived from the variable zoom fisheye algorithm. Working with a limited screen space we apply a *Degree-of-interest* (DOI) function to guide the level of detail used in presenting information. Furthermore we determine the user's information and navi ...

**Keywords:** detail + context technique, fisheye display, human-computer interfaces, information navigation, screen layout, zoom navigation, zooming interfaces

## 20 Internet routing instability

Craig Labovitz, G. Robert Malan, Farnam Jahanian

October 1997 **ACM SIGCOMM Computer Communication Review , Proceedings of the ACM SIGCOMM '97 conference on Applications, technologies, architectures, and protocols for computer communication**, Volume 27 Issue 4

Full text available:  pdf(1.95 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

This paper examines the network inter-domain routing information exchanged between backbone service providers at the major U.S. public Internet exchange points. Internet routing instability, or the rapid fluctuation of network reachability information, is an important problem currently facing the Internet engineering community. High levels of network instability can lead to packet loss, increased network latency and time to convergence. At the extreme, high levels of routing instability have lea ...

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